

REMARKS

This application has been carefully reviewed in light of the Office Action dated May 25, 2009. Claims 1 to 5, 6 to 9 and 11 to 15 are pending in the application, of which Claims 1, 11, 14 and 15 are independent. Reconsideration and further examination are respectfully requested.

Claims 1 to 3, 8, 11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pub. No. 2001/0046065 (Furukawa), U.S. Patent No. 6,134,568 (Tonkin), U.S. Pub. No. 2001/0044868 (Roztocil) and further in view of U.S. Patent No. 6,709,176 (Gotoh). Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa, Tonkin, Gotoh, Roztocil and further in view of U.S. Pub. No. 2003/0206314 (Tanimoto). Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa, Tonkin, Gotoh and further in view of U.S. Patent No. 6,128,451 (Fukuchi). Reconsideration and withdrawal of these rejections are respectfully requested.

The present claims concern an apparatus or method that displays a process flow list having a plurality of display areas for a plurality of procedures of a printing job. The procedures are included in a printing job and may be executed on a combination of devices in sequence or by a user in order to satisfy the requirements of the printing job wherein the form of the display area for a procedure to be performed next is changed so as to draw the user's attention. Such a display list with the next procedure displayed in a changed form allows a user who has instructed the printing job to easily confirm or understand the status and the sequence of the process flow used to execute the printing job using the combination of devices.

By virtue of these features, a user may easily recognize which one of a plurality of procedures should be performed next by seeing which of the display area has a changed form. In

addition, a user may easily recognize which procedures has been completed among the plurality of procedures for a printing job by seeing the process flow list and the changed form of a display area.

Turning to specific claim language, amended independent Claim 1 is directed to a printing control apparatus which performs a printing process employing a plurality of printing devices. The apparatus includes a printing attribute acquisition unit configured to acquire an attribute of a printing job to be processed; an adaptive environment determination unit configured to obtain a device combination capable of executing the printing job based on performance information representing at least performance of each of the plurality of printing devices and the acquired attribute of the printing job, the device combination including a first device and a second device which executes a process using a print product printed by the first device; and a display unit configured to display a process flow list representing a process flow to execute the printing job by employing the device combinations obtained by the adaptive environment determination unit and an operation to be performed by a user in the second device. The process flow list is a list in which display areas of a plurality of procedures which constitute the printing job are listed in the order of execution, and wherein the plurality of procedures include a work procedure in which a user moves the print product printed by the first device from the first device to the second device and process procedures to be performed by respective devices included in the device combination obtained by the adaptive environment determination unit. The display unit changes a display form of a display area of a procedure which is to be performed next, among the plurality of procedures in the process flow list.

Applicant submits that the cited references, namely Furukawa, Tonkin, Roztocil and Gotoh, whether considered alone or in combination, fail to disclose or suggest all of the features of Claim 1. In particular, the cited references fail to disclose or suggest displaying a

process flow list representing a process flow to execute a printing job by employing device combinations obtained by an adaptive environment determination unit and an operation to be performed by a user in a second device, wherein the process flow list is a list in which display areas of a plurality of procedures which constitute the printing job are listed in the order of execution, and wherein the plurality of procedures include a work procedure in which a user moves a print product printed by a first device from the first device to the second device and process procedures to be performed by respective devices included in the device combination, and changing a display form of a display area of a procedure which is to be performed next, among the plurality of procedures in the process flow list.

In contrast to the present claims, Furukawa merely describes a host computer 1 that searches network printers for one or more network printers which satisfy conditions required to print specific print data. The host computer generates an information list 10 including locations and speeds of available printers. The information list 10 is displayed and a user can select one or more desired printers to execute printing using the print data. As clearly described in Paragraph [0097] of Furukawa, the selected printers execute the same procedure in parallel. However, the manner in which the printers are displayed is not related at all to an execution order nor is the manner of display related to the use of combined devices in order to complete a printing job as featured in the present claims.

Furthermore, Tonkin discloses a computer system 150 displaying a preview display of a document to be printed. The preview display merely shows a composition of a page such as a front page of a printed document with positions at which the printed document is to be bound. However, a user cannot recognize, from the displayed composition, when they should bind the document.

As admitted in the Office Action, Furukawa and Tonkin fail to disclose or suggest displaying a process flow list representing a process flow to execute the printing job by employing the device combinations obtained by the adaptive environment determination unit and an operation to be performed by a user in the second device as featured in Claim 1. Accordingly, Furukawa and Tonkin also fail to disclose or suggest a display list having display areas with forms that change to show which procedure is to be performed next.

In addition, Roztocil discloses a production output device that signals an operator if a manual intervention is required to execute unsupported page features. For example, the production output device directs the operator to remove partially finished documents from the production output device and transfer the removed partially finished documents to a binding machine. That is, Roztocil suggests directing or signaling the manual operation to the operator by displaying message strings or outputting voice messages. However, since Roztocil does not disclose how the production output device directs the manual intervention to the operator, it cannot be said that Roztocil discloses or suggests displaying a process flow list representing a process flow to execute a printing job by employing device combinations obtained by an adaptive environment determination unit and an operation to be performed by a user in a second device, wherein the process flow list is a list in which display areas of a plurality of procedures which constitute the printing job are listed in the order of execution, and wherein the plurality of procedures include a work procedure in which a user moves a print product printed by a first device from the first device to the second device and process procedures to be performed by respective devices included in the device combination, and changing a display form of a display area of a procedure which is to be performed next, among the plurality of procedures in the process flow list as featured in Claim 1.

Gotoh discloses displaying for one or more printers a graph having images representing jobs processed by a printer. The graph is generated in part by reading out a state of each printer in a selected group from a printer table. Images of icons corresponding to the read out states are read out from a storage section. A job graph display section of a schedule view display section requests a database managing section to retrieve all the jobs which are not allocated to the printers from a print schedule table. Then, the length, color or pattern of a rectangular shape showing each job are determined from a printing time and the state in the print schedule table, thereby forming an image representing each job. Further, the order of the rectangular shapes formed representing each job is determined in accordance with the input date and time of each job held in the print-job table, and the rectangular shapes are connected in this order at a distance of one dot, thereby forming an image of the job graph of the unallocated job. See Gotoh, column 15, lines 11 to 24. That is, Gotoh displays for a single printer a graphic image representing the status of the printer in regard to scheduled jobs for that printer along with the state of the printer in textual form. For each job processed by the printer, the job is shown as a monolithic rectangle with cross hatching or coloring used to represent the type of the job. See Gotoh, Fig. 15. However, in the present claims, the process flow list is a list in which display areas of a plurality of procedures which constitute the printing job are listed in the order of execution. In Gotoh, each print job is shown as a monolith with no detail describing the procedures within a print job.

In the Office Action, it is asserted on Page 5 that Gotoh discloses displaying emphatically in a flow list a procedure which is to be performed next among the plurality of procedures. However, Gotoh only displays print jobs scheduled for a group of printers with each printer having its own displayed schedule. Within that displayed schedule, print jobs scheduled for the printer are shown as graphic images that are updated as the scheduled print jobs are

executed. However, nowhere does Gotoh disclose or suggest a flow list that displays individual procedures for a print job and then changing the form of a display area for a procedure if that procedure is next to be performed as featured in Claim 1. Therefore, it cannot be said that Gotoh discloses or suggests displaying a process flow list representing a process flow to execute a printing job by employing device combinations obtained by an adaptive environment determination unit and an operation to be performed by a user in a second device, wherein the process flow list is a list in which display areas of a plurality of procedures which constitute the printing job are listed in the order of execution, and wherein the plurality of procedures include a work procedure in which a user moves a print product printed by a first device from the first device to the second device and process procedures to be performed by respective devices included in the device combination, and changing a display form of a display area of a procedure which is to be performed next, among the plurality of procedures in the process flow list as featured in Claim 1.

In light of the deficiencies of the cited references as discussed above, Applicants submit that independent Claim 1 is now in condition for allowance and respectfully request same.

Independent Claims 11, 14 and 15 are directed to a method, a computer-readable medium and a computer program product , respectively, substantially in accordance with the apparatus of Claim 1. Accordingly, Applicants submit that Claims 11, 14 and 15 are also now in condition for allowance and respectfully request same.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed allowable over the cited art for at least the same reasons. Because each dependent claim is also deemed to define an additional

aspect of the invention, however, the individual consideration of each dependent claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

CONCLUSION

Any necessary fees are being paid concurrently herewith. The Director is hereby authorized to credit any fee overpayment, or charge any fee underpayment, to Deposit Account No. 06-1205.

Applicants' undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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